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ABSTRACT

The factors which influence a speaker's decision to use one categorization for an object as opposed to others that are available are analyzed. The categories that are most used in speech are basic level categories established at the most abstract level at which the category members: (1) share a number of physical and functional attributes, (2) elicit a consistent motor pattern from human interacting with them, and (3) exhibit a similar, easily recognizable shape. Data obtained from free speech samples correlate with that obtained from a controlled linguistic environment experiment and substantiate the hypothesis. When superordinate rather than basic level categorization is used, it is usually due to the need to refer to groups of individuals, the effects of generalization in memory, or the need to refer to objects of poor basic level codability. Where distinct differences cannot be drawn among the superordinate, basic level, and subordinate lexical choices, other classificatory parameters must be considered. Contextual factors are important in determining lexical choice for the categorizations used and must be adapted to the exigencies of the speech situation. (PMJ)

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ON "BASIC LEVELS" AND THE CATEGORIZATION OF OBJECTS IN ENGLISH DISCOURSE

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In this paper I will consider the question of how English speakers refer to concrete objects in discourse, basing my observations on an analysis of all nominal mentions of such objects in a number of oral narratives produced by American speakers. I will direct myself toward a discussion of those factors which, in the light of this analysis, influence the speaker's decision, at a given point in the discourse, to use one categorization for an object as opposed to others that are available.

The data on which this study is based were collected as part of an ongoing research project at Berkeley headed by Wallace Chafe[1]. The corpus we will consider here is composed of all 1720 nominal references to concrete entities contained in 25 taped narratives elicited from female speakers between 17 and 30 years of age.[2] The subjects were shown a brief film in color and sound, based on a plot involving the theft of a basket of pears by a boy on a bicycle. They were then asked to tell "what happened in the movie", as they would tell it to a friend. Twenty of the narratives were elicited within a few minutes after the showing of the film, and the remaining ones were elicited from five of the original subjects after an interval of six weeks.

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We began our analysis of this data with an awareness of a number of recent anthropological and psychological studies which have suggested the existence of "basic level" lexical items which correspond to "basic level" perceptual and semantic categories. Berlin, Breedlove, and Raven, for example, (BB&R 1973) have proposed that folk biological taxonomies are similarly structured from culture to culture, containing a limited number of taxonomic levels which are recognizable on the basis of the structure of the nomenclature associated with them. Taxa at different levels, they argue, possess different degrees of psychological importance, and they single out the middle level, which they dub the "generic" level, as being of special psychological relevance. Labelled taxa at this level are typically the most numerous, the most frequently used in speech, and the first learned by children. Thus, for example, the English generic term oak would be learned before and used more frequently than its subordinate post oak or its superordinate, tree.

Eleanor Rosch has made similar claims, based on her work with American English speakers. She proposes that "of the many levels of abstraction at which any given thing can be classified, there is one basic level of abstraction at which the organism can obtain the most information with the least cognitive effort" (Rosch et al 1976). Thus, for example, chair is the basic level category in a hierarchy of abstraction which also includes furniture as a superordinate and subordinates such as kitchen chair, armchair, etc.

On the basis of a series of experiments using city-dwelling American English speakers as subjects, Rosch has established basic

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level norms for nine categories of concrete objects - fruit, tools, clothing, vehicles, trees, birds, musical instruments, furniture, and fish. These basic level categories, Rosch argues, are established at the most abstract level at which the category members share a significant number of physical and functional attributes, elicit a consistent motor pattern from humans interacting with them, and exhibit a similar, easily recognizable shape.

On the basis of these results, Rosch predicts that "universally, basic categories should be the basic classifications made during perception, the first learned and first named by children, and the most codable, most coded, and most necessary in the language of any people" (1975, p.435).

It is the claim that these categories will be "the most coded", that is, the most frequently used in speech, that is relevant to our research here. In support of this contention Rosch has reported the results of an experiment in which subjects were asked to provide names for a number of concrete objects depicted in a series of drawings. They responded almost invariably with the basic level name, although they knew the correct super- and subordinate names for the objects in question. These results were obtained, however, within a context quite different from those in which linguistic categorizations are typically used. Subjects were simply producing names in response to sets of stimuli.

Turning to our data, however, we find that the usage of nouns in our film narratives is in striking agreement with Rosch's hypothesis that it is basic level names which are most frequently used to refer to concrete objects in actual discourse. Nouns denoting objects belonging to six of the nine categories investigated by Rosch are distributed as indicated in Table 1. Basic level names, as determined by Rosch's work, clearly outnumber super-[3] and subordinate names, constituting 94% of the total names used.

TABLE 1

Nouns referring to members of categories investigated by Rosch

Category	Superordinate	Basic	Subordinate
Fruit	19	314	---
Tools	---	56	---
Clothing	4	117	8
Vehicles	---	179	---
Trees	---	82	14
Birds	---	---	5
Total	23 (3%)	748 (94%)	27 (3%)

And the distribution of nouns referring to concrete entities belonging to categories not examined by Rosch follow a very similar pattern. Table 2 shows the distribution for most of these additional categories, where mentions have been classified as basic, superordinate, and subordinate on the basis of parallelism with estab-

lished norms for similar categories considered by Rosch.[4]

TABLE 2
Nouns referring to members of categories not investigated by Rosch (levels established by analogy)

Category	Superordinate	Basic	Subordinate
Containers	---	140	9
Animals	---	49	4
Toys	7	7	9
Vegetation other than trees	---	1	2
Other natural objects	---	30	---
Other synthetic obj.	---	2	---
Landscape	2	77	8
Total	9 (3%)	306 (88%)	32 (9%)

For three remaining categories, for reasons which will be discussed below, it was difficult to determine on these same grounds just which mentions were basic, subordinate, and superordinate. For these three categories, the names used most frequently by the widest range of subjects were considered basic. This procedure, although logically suspect, produced intuitively satisfying results, since the basic terms established in this way, e.g. man, overwhelmingly outnumber the other terms used, e.g. pearpicker, farm laborer. The frequency distributions for these three categories appear in Table 3.[5]

TABLE 3
Nouns referring to members of categories not investigated by Rosch (levels established by range of usage)

Category	Superordinate	Basic	Subordinate
Human beings	18	442	38
Body parts	---	36	3
Object parts	7	30	1
Total	25 (4%)	508 (88%)	42 (7%)

Combining the results of Tables 1, 2, and 3, we arrive at the overall distribution shown in Table 4, where the predominance of Rosch's basic level names in our narratives emerges clearly.

TABLE 4
Overall distribution of nouns referring to concrete entities

Superordinate	Basic	Subordinate
57 (3%)	1562 (91%)	101 (6%)

When we consider the cases in which superordinate rather than basic level names are used, several possible causes for their choice suggest themselves - the need to refer to groups of individuals, the effects of generalization in memory, and the need to refer to objects of poor basic level codability. Thus, in sentence

1) below,

> 1) you got the feeling of spring or summer anyway, at least I did because it was very ... the sky was blue, and it seemed ... seemed warm. ... from the activities of the people.

The effects of memory on the use of superordinate terms can be seen in Table 5 below, where the frequency of use of superordinates has jumped from 2% in the first narratives to 9% in the repeat narratives. This trend was exemplified by the use of the superordinate term fruit nearly one third of the time in the repeat narratives, whereas the basic level terms pear and apple were used in all but one instance in the first narratives.

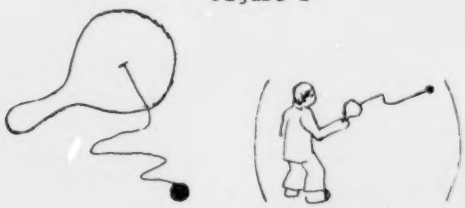
TABLE 5
Distributions for 1st vs. repeat narratives

	Superordinate	Basic	Subordinate
1st narratives	30 (2%)	1284 (92%)	89 (6%)
Repeat narratives	27 (9%)	278 (88%)	12 (4%)

This effect appears to be part of a larger tendency, for the repeat narratives were on the whole less detailed than the earlier ones and contained mentions of fewer concrete objects.

The use of superordinates to refer to objects of low basic level codability is illustrated by the references made by our subjects to the object depicted in Figure 1.

Figure 1



Some subjects were aware of the names paddleball and (in one instance) pongo used to refer to this object. Others assigned the object to related basic level categories bearing conventional names, e.g. bat and ball. Others resorted to more clearly appropriate superordinate labels such as toy and thing, as illustrated in 2).

> 2) ... and this one's .. playing with one of those ... those wooden things that you hit with a ball.

In these cases where a superordinate level noun is used, however, it is not always accurate to consider the entire reference to be non-basic, for in many cases superordinate level nouns are accompanied by modifiers which serve to narrow down the referent class in

question and create an ad hoc basic level characterization. Thus, in 2) above, the speaker was not content to refer to the object in question as simply one of those things, but rather, she narrowed down the referent class she had in mind by specifying its physical composition (wooden) and a characteristic action associated with it (that you hit with a ball).

It is of course not the case that all modifiers serve to narrow down the referent class of the noun they modify. As in 3),

3) .. and the ... the little .. boy that fell off the bicycle gives him ... gives them three-- .. pears

some modifiers are used, rather, to enable the hearer to pick out a specific referent the speaker has in mind or to convey additional information about this referent without consigning it to a class of, for example, boys that fell off bicycles.[6]

It is not always possible to decide, in a given instance, whether a modifier is being used in a referent- or referent class-modifying sense, but in some cases, as when the modifier denotes temporary states or actions of the referent, it is clearly the referent-modifying function which is involved. Table 6 illustrates the distribution of modifiers with respect to superordinate, basic, and subordinate head nouns, when modifiers of the referent-modifying type have been eliminated.

TABLE 6

Mean number of reference class modifiers per nominal mention

Superordinate	Basic	Subordinate
.47	.15	.29

As this table indicates, superordinate level names are modified nearly half the time to produce characterizations comparable in specificity to those containing basic level nouns.

Thus, if we consider the level of the characterization as a whole rather than simply the level of the head noun, the distribution shown in Table 7 emerges. In this table, the basic level heading subsumes mentions consisting of both unmodified basic level nouns and modified superordinate nouns, and the subordinate level heading subsumes mentions consisting of both subordinate nouns and modified basic level nouns.

TABLE 7

Distribution of complete references (including modifiers)

Superordinate	Basic	Subordinate
30 (2%)	1362 (79%)	328 (19%)

Although the predominance of basic level characterizations defined in these terms is not so overwhelming as when only the level of the head nouns themselves is considered (79% compared to 91%), in both cases, it is clearly the basic level as established by

Rosch which is favored.

The preceding discussion has been based on the convenient fiction that it is indeed possible to divide up all mentions of concrete objects into the three unambiguous classes "superordinate", "basic", and "subordinate". This is, however, not the case. In some instances, as noted above, the use of modifiers muddies these hierarchical distinctions. In others, which we will return to below, the lexical field is so densely populated that a whole array of appropriate labels exists for a given entity, many of them difficult to characterize as superordinate or subordinate to others. And in other instances, although a hierarchical set of labels exists for referring to some object, this object itself does not seem to be basic level.

As a case in point, let us return to our narratives and consider mentions of body parts. There is remarkable consistency in the way our subjects refer to these entities. All mentions of heads, faces, eyes, moustaches, necks, hands, fingers, and feet use precisely these nouns. No one refers to limbs or digits or ring fingers. Only in the case of the legs and hair is there any variability, when the terms leg and knee, for the legs, and hair, braids, and pigtails, for the hair, are used. The overwhelming consensus on the choice of these terms would seem to suggest that they are good candidates for basic levelhood, linguistically, at least.

But there is a problem with this conclusion. While human characters are mentioned 1714 times in our narratives (including pronominal mentions), human body parts are mentioned only 39 times. That is, human beings as wholes are mentioned approximately fifty times as frequently as are the parts of which their bodies are composed.

These priorities can of course be overridden in the appropriate circumstances - medical textbooks, reports of senatorial hair transplants, etc., but a glance at the Kučera and Francis and the Lorge magazine counts of word frequency indicates that the trend observed in our data is not a peculiar one. As the figures in Table 8 indicate, the man is generally greater than the sum of his parts.

TABLE 8

Frequency of mention of body parts in published frequency counts (representative sample)

	man	hand	head	arm	shoulder	finger	elbow	wrist	fingernail
Kučera and Francis	2114	720	467	218	112	106	17	16	2
Lorge	10967	3334	5047	2336	1135	858	154	170	2

Not surprisingly, the same trend is evident in mentions of nonhuman objects, which are mentioned approximately twenty times more frequently than their parts, e.g. a ladder compared to its rungs.

And a similar pattern emerges with respect to mentions of articles of clothing, which occur only 129 times, compared to the 1714 mentions of the humans who wear them. Although clothes cannot strictly be considered parts of human wholes, they generally appear

accompanied by people, who wear clothes nearly as predictably as they possess heads, arms, and legs.

It is also interesting to note that mentions of all these parts of wholes (body parts, objects parts, clothing) are often preceded by possessive or definite articles, even on initial mentions, which might be expected to be indefinite. These parts are seen as affiliated to their wholes, and this affiliation is expressed by the use of possessives, which occur before 85% of the mentions of body parts, for example , and by the use of definite articles which can be appropriately used only because the whole has already been mentioned, setting up the expectation that the part also exists.

What all this tells us is that the choice of a lexical item to refer to a concrete entity cannot be predicted solely by considering the hierarchy of superordinate, basic, and subordinate labels available. In many cases the object to be referred to can be seen either as an independent whole or as a part of a larger entity, and this point of view is influential as well in determining lexical choice.

The data from our narratives indicates that in most cases it is the whole that is referred to. Thus, it is the man who is picking the pears, not his hands or his fingers. But there is an upper limit to this generalization. While humans are mentioned in preference to their parts, physically separable groups such as a man and his goat or a tree and a ladder leaning against it are described in exactly the terms I have just used, although in each case they constitute, at least temporarily, unitary physical entities.

From these considerations, then, another hierarchy emerges - that of superordinate, basic, and subordinate levels of physical inclusiveness. This hierarchy is by no means identical to Rosch's conceptual-taxonomic hierarchy, although some linguistic phenomena, for example, the paucity of lexical items available to refer to entities at the superordinate level, appear to be related in the same way to both hierarchies.

In any case, it is clear that the level at which a given entity is perceived in both hierarchies - taxonomic and physical inclusiveness, will have a significant effect on how it is referred to in discourse.

But other factors must be taken into consideration as well, as can be seen when we return to those cases, noted earlier, where a whole array of lexical choices is available to refer to a given entity. This is quite strikingly the situation with the lexical choices available to refer to human beings. A total of 31 different head nouns were used to refer to the seven characters mentioned in our narratives, a mean of 4.4 categorizations per character, considerably higher than the mean, 2.7, for all concrete entities (including humans) mentioned in the narratives.

Unlike the paddleball, which was also denoted by a wide range of nouns, it was not the case with human referents that they were uncodable, difficult to categorize. This is indicated by the fact that none of the other reflexes of low codability - a high number of hedges, false starts, hesitations, etc., were associated with them.[7]

Moreover, in considering these names, it is difficult to characterize them as basic, superordinate, or subordinate in Rosch's sense since they are based on different parameters. Thus it is difficult to decide, even on intuitive grounds, whether terms such as man, kid, farm laborer, friend, Chicano, etc. are basic or not.

Among these terms, however, several stand out on the basis of their greater overall frequency, frequency on initial mentions of characters, frequency as the sole categorization used by any subject for a given character, and frequency as the favored categorization used for a given character by a given subject. These are the terms man, boy, girl, kid, and guy, and their predominance as indicated by these various measures can be seen in Table 9[8].

TABLE 9
Frequency distribution of basic level terms for human beings (man, guy, boy, kid, girl) vs. other terms

	Total number of mentions	Number of uses as first men. of a character	Number of uses as sole categ. of a character	Number of uses as most frequent cat. of a char.
Basic	439 (88%)	127 (81%)	99 (86%)	118 (98%)
Other	59 (12%)	30 (19%)	16 (14%)	3 (2%)

These frequency distributions do not, of course, constitute incontrovertible evidence for the primacy of the perception and representation of human beings in terms of these categories. But the frequent use of these terms, which distinguish their referents primarily along the dimensions of age and sex, suggests that information about a person's identity in terms of these parameters may be crucial to English speakers' understanding of what a person is, since it reveals much in a general way about how he or she looks, what his or her actions and concerns are likely to be, how we will interact with him or her.

Consideration of the cases in which our subjects changed their characterization of a particular individual during the course of their narratives provides another bit of evidence for the basicness of the terms listed above. As can be seen from Table 10,

TABLE 10
Number of instances of switching among nominal characterizations of human beings

Basic --> Basic	Basic --> Other	Other --> Basic	Other --> Other
46 (64%)	12 (17%)	10 (14%)	4 (6%)
58 (81%)		14 (20%)	

in most instances the switch is from one of these basic terms, either to another basic term, e.g. man to guy, or to a non-basic one, e.g. man to pearpicker. Thus, our subjects tended to establish the characters in their narratives by the use of these basic terms, only then switching to terms which focus on ethnic status, interpersonal relationship, etc. It is also striking that switches from the use

of one of these more specific terms to another were extremely rare, suggesting that once a person has been tagged as a farm worker or a thief, he has been specified as completely as necessary. We need not know the occupation and kinship status of every individual we encounter. In many cases, in our culture, at least, just age and sex is sufficient.

What all this suggests is that, with respect to certain classes of entities, certain parameters will be of greater classificatory relevance than others. It should not surprise us if this has an effect on both lexical choice in discourse and on the development of the lexical resources of a language. Thus, since human beings may be of interest to us by virtue of any of a number of characteristics they possess, the lexicon contains many lexical items for denoting human beings by reference to these various parameters. Among these terms, those which convey information about those characteristics considered to be of more crucial interest (within a given sub-culture or linguistic context) will be used more frequently [9].

At any rate, it is clear that reference to human beings is a special case of reference to concrete entities. The fact that our lexicon contains such a vast number of appellations for human beings and that speakers often use more than one of these terms in reference to a given individual within a given discourse indicates that the question of basic levels and crucial parameters may be much more complex with respect to this semantic domain than with respect to others.

The fact that there are so many terms and that speakers switch among them allows us to investigate another aspect of linguistic categorization which is obscured, by and large, when we consider mentions of other domains. That is, why do speakers switch their categorizations of objects?

We have already considered two possible causes of switching - low codability of the referent, as in the switch in 4) below, and

4) like a wooden paddle --→ the ... the thing --→ the UH ...
... the whatever it was

the need to establish the basic characteristics of the referent before providing the less essential ones, as in one subject's switch from kid to buddy. When we consider mentions of human beings in our narratives, it is clear that categorization switches may also be motivated by the desire to avoid ambiguity and the desire to realize the speaker's broader communicative goals, in this case, the narration of a plot.

The subjects in our study were asked to describe "what happened" in the film they had been shown, and in some cases switches of categorization corresponded to the progression of the plot. Thus one subject used the series of terms in 5) below

5) boy --→ thief boy --→ bicycle boy --→ bicycle thief

to refer to a single individual as he appeared on a bicycle, stole a basket of pears, and rode off with them. It seems likely that these shifts correspond to a desire to facilitate the hearer's comprehension of the plot, or at most, to shifts in the speaker's perspective on the character, rather than to shifts in his perception of him. And it seems probable that similar types of switches occur in accordance with other communicative goals - to persuade, arouse, etc.

In other cases, subjects refer to a given individual by a given name until another individual characterizable in those same terms appears on the discourse scene and the need to differentiate them arises.

From these examples of name switching it is clear that the speaker's linguistic categorization of an entity does not necessarily correspond directly to his perception of it. In order to communicate about this entity he must fit it into one of the conventionalized lexical slots provided by his language, which may or may not be arranged in accordance with the structure of his real-world experience. Thus the poor codability of the referent may give rise to different linguistic categorizations of it. The requirements of the discourse situation will also be influential, where the need to provide a certain amount of required information about the entity (age and sex, with respect to people, for example) may come in conflict with the necessity for ensuring the addressee's comprehension of the narrative by avoiding ambiguous reference, etc.

The speaker's communicative goals and his social position with respect to both his referents and his interlocutors are of course relevant as well, as is the observance of stylistic constraints. The effects of these factors were, however, difficult to identify in our narratives, since our interviewing procedures were not designed to elicit narratives at various stylistic levels.

The obvious effect of all of these factors on the categorizations chosen by our subjects suggests several reasons why the results on Rosch's naming tasks appeared to be in such clear accord with the dictates of the basic hierarchical level hypothesis.

First, the choice of stimuli - none of the concrete objects investigated by Rosch were parts of permanent physical wholes, and none of them were people. As we have seen, categorizations of objects of these types are difficult to handle solely within the superordinate - basic - subordinate hierarchy framework, for different reasons in the two cases.

Secondly, the stimuli presented by Rosch were good examples of the categories they were intended to represent. This is clearly not the case with many of the entities we encounter and wish to speak about in our daily lives. Since the lexical resources of our language do not always match our needs, we are often forced to use superordinate terms rather than basic ones, or to qualify our categorizations with modifiers which confuse the basic - superordinate - subordinate distinction.

Thirdly, Rosch's subjects were asked to provide names for concrete objects in a context quite different from those in which categorizations are typically used. There was no addressee, no

personal or social relationship to maintain, no larger communicative goal.

Yet we have seen how important contextual factors are in determining the ways in which the speaker refers to entities in actual speech. The choice of lexical characterizations for concrete objects is undoubtedly influenced by the tendency to represent (and perhaps perceive) these objects in terms of certain central categorizational parameters and at the basic level of the two hierarchies of taxonomic abstraction and physical inclusiveness. This is indicated by the preponderant usage of basic level characterizations in our narratives. But this tendency is not the sole determinant of linguistic usage, for the categorizations used must also be adapted to the exigencies of the speech situation. It may be that the basic level categorization will be used, other things being equal. But in discourse they rarely are.

Footnotes

[1]This project is supported by NIMH grant #MH 25592. The analysis presented here would not have been possible without the work of the other project members - Rob Bernardo, Wally Chafe, Pat Clancy, Jack Du Bois, Nancy Menzel, and Deborah Tannen, who participated in the design of the study as well as the collection and analysis of the data. Thanks are also due to Farrell Ackerman, John Kingston, Eleanor Rosch, and Tony Woodbury, whose helpful comments awakened me to some of the problems in an earlier version of this paper.

[2]In citations from our narratives, normal English orthography has been used, with the following additions and modifications:

. = sentence-final intonation
, = clause-final but not sentence-final intonation
.. = a very brief pause, break in timing
... = a measurable pause, longer than .1 second
-- = lengthening of the preceding phoneme or syllable

[3]In citing these distributions I do not wish to imply that the usage in our narratives of basic terms as determined by Rosch necessarily corresponds to perception of their referents at this level. As will be discussed below, lexical choice is sometimes conditioned by discourse rather than purely perceptual factors. And it is also impossible for us to know the exact nature of the referent each individual speaker associates with the usage of a lexical item without an awareness of the overall structure of both his discourse and his personal lexicon. Because every individual has different areas of interest and expertise, his idiosyncratic lexical resources will not mirror exactly either those of the language as a whole or those of an "average" group of speakers such as those investigated by Rosch. Thus, as Rosch herself suggests, although airplane may be a basic level term for English speakers in general, it is probably a superordinate for, say, airplane mechanics.

Like the lexicon of an individual speaker, the lexicon of the language as a whole may differ from that of an average group of speakers at a given point in time. This must be taken into account

in considering the preponderance of conventionalized lexical items at a given level as evidence for the perceptual-semantic priority of that level for actual speakers of the language. Indeed, a mismatch between the lexicalized basic level and the semantic basic level for speakers of the language was encountered by Rosch in her research. While the form of such English labels for biological taxa as oak, jay, and trout would appear to conform to Berlin, Breedlove, and Raven's criteria for generic names in terms of the language as a whole, the basic level established by Rosch for her (city dweller) subjects for these categories was one level higher, i.e. tree, bird, fish.

What all this suggests is that the question of basic levels can be considered from several perspectives - the resources of the language as a whole, the lexical competence of a group of speakers of the language at a given point in time, the personal lexicon of an individual speaker, and usage in particular discourse contexts. We need not expect all of these basic levels to fall at an identical level of abstraction. Each is defined within its own system, which is not identical to any of the others, though all of them come into play any time an individual uses language.

We must therefore be cautious in interpreting evidence from one domain as support for our claims about another, although the apparent existence of basic levels within each of these domains, and the similarity among them, are striking indeed, suggesting that similar perceptual-cognitive factors may well be at work in each case.

[4]Although there were a small number of difficult cases, this was in general a fairly unproblematic task. Thus, for example, for mentions of members of the category "container", it is intuitively easier to imagine the shape and physical and functional attributes of a basket (established as basic level here) than it is to do the same for a container.

[5]What this criterion really establishes is the basic level in usage, rather than the basic context-free semantic level of the type established by Rosch. It is interesting to note, however, that the superordinate-basic-subordinate distributions arrived at here are very similar to those based on Rosch's criteria and presented in Tables 1 and 2.

The validity of this measure as an indicator of basic level in usage is corroborated by several other types of linguistic evidence which will be discussed with respect to mentions of human beings.

[6]cf. Bolinger's distinction between referent and reference modification, exemplified by the pair the drowsy policeman and the rural policeman (Bolinger 1967).

[7]See Lantz and Stefflre's enlightening discussion of the validity of various measures of codability and the complicating effect of the existence of a variety of lexical alternatives. (Lantz and Stefflre 1964).

[8]Because no women appear in the film, there is only one use in our narratives of the anticipatedly parallel term woman, used in this instance to refer to a character most subjects called a girl.

[9]The same principles probably apply to entities in other domains, but since our interest in these entities is in general more limited, there are fewer corresponding lexical choices available and we are more consistent in the names we apply in discourse. The relevant classificatory parameters for these categories are more stable from context to context and individual to individual, although they probably vary from one class of entities to another. Age and sex are clearly not relevant to our categorization of ladders as such, for example, although function and perhaps shape probably are. See Downing 1977 in press for some evidence from noun compounding which bears on the nature of these parameters for different entities.

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